GenCore version 5.1.3

OM protein - protein search, using sw model

Run on: November 30, 2002, 12:33:53 ; Search time 12.5 Seconds
(without alignments)
3868.449 Million cell updates/sec

Title: US-10-025-514-8
Perfect score: 2675
Sequence: 1 MSGKSFKAGVCPPKKSAQCL.....IEQNTKSPLFMGKVVNPTQK 503

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2052.5	76.7	418	1	ITHU	alpha-1-antitrypsi
2	1909.5	71.4	409	1	ITBA	alpha-1-antitrypsi
3	1467.5	54.9	411	1	ITRT	alpha-1-antitrypsi
4	1465.5	54.8	416	1	ITSH	alpha-1-antitrypsi
5	1458.5	54.5	413	2	S60036	alpha-1-antitrypsi
6	1447.5	54.1	416	2	S21097	alpha-1-antitrypsi
7	1386	51.8	406	2	JX0346	alpha-1-antiprotei
8	1347	50.4	413	2	I49470	alpha-1 proteinase
9	1346	50.3	402	2	I49471	alpha-1 proteinase
10	1345	50.3	413	2	I49452	alpha-1-antitrypsi
11	1343.5	50.2	413	2	S54981	alpha-1-antiprotei
12	1341	50.1	413	2	I49472	alpha-1 proteinase
13	1339.5	50.1	413	2	JX0154	alpha-1-antiprotei
14	1328	49.6	413	2	I49473	alpha-1 proteinase
15	1326.5	49.6	413	2	JX0267	alpha-1-antiprotei
16	1323	49.5	413	2	I56481	alpha 1-proteinase
17	1319.5	49.3	413	2	I49474	alpha-1 proteinase
18	1308.5	48.9	413	2	A54968	alpha-1-antitrypsi
19	1306	48.8	412	1	ITMSC	alpha-1-antitrypsi
20	1293	48.3	405	2	A39088	alpha-1-antiprotei
21	1246	46.6	410	2	C39088	contrapsin precurs
22	1187.5	44.4	388	2	B39088	alpha-1-antiprotei
23	1165	43.6	410	2	A45457	alpha 1-proteinase
24	1157.5	43.3	420	2	A28882	alpha-1-antitrypsi
25	845	31.6	410	2	I50494	serine proteinase
26	830	31.0	433	1	ITHUC	alpha-1-antichymot
27	829	31.0	418	2	JX0129	contrapsin precurs
28	826.5	30.9	416	2	B29131	kallikrein-binding
29	820	30.7	405	2	A28321	corticosteroid-bin
30	819.5	30.6	406	2	I53281	corticosteroid-bin
31	818	30.6	418	2	S23675	contrapsin-related
32	816	30.5	406	2	A39339	protein C inhibito
33	816	30.5	427	2	A49518	kallistatin precur
34	811	30.3	383	2	A36117	corticosteroid-bin
35	810.5	30.3	418	2	JH0494	alpha-1-antichymot
36	810	30.3	408	2	S11320	serine proteinase
37	804.5	30.1	417	2	S19724	kallikrein-binding
38	804	30.1	412	2	I46421	thyroxine-binding
39	803	30.0	403	2	S08102	serine proteinase
40	796	29.8	430	2	A49190	corticosteroid-bin
41	787.5	29.4	415	2	A47224	thyroxine-binding
42	774.5	29.0	418	2	A39567	thyroxine-binding
43	771.5	28.8	418	1	S31507	serine proteinase
44	742	27.7	412	2	S31505	serine proteinase
45	739	27.6	372	2	I50492	alpha-1-antitrypsi

ALIGNMENTS

RESULT 1
ITHU
alpha-1-antitrypsin precursor [validated] - human
N;Alternate names: alpha-1-AT; alpha-1-proteinase inhibitor
C;Species: Homo sapiens (man)
C;Date: 30-Nov-1980 #sequence_revision 31-Mar-1992 #text_change 15-Sep-2000
C;Accession: A21853; B21853; A93352; A90944; A58528; A23174; A93281; A32336; S14476;
R;Long, G.L.; Chandra, T.; Woo, S.L.C.; Davie, E.W.; Kurachi, K.
Biochemistry 23, 4828-4837, 1984
A;Title: Complete sequence of the cDNA for human alpha-1-antitrypsin and the gene for
A;Reference number: A21853; MUID:85047190; PMID:6093867
A;Accession: A21853
A;Molecule type: mRNA
A;Residues: 1-418 <LON1>
A;Cross-references: GB:K02212; NID:g177830
A;Experimental source: M (normal) allele
A;Accession: B21853
A;Molecule type: DNA
A;Residues: 1-287,'V',289-418 <LON2>
A;Cross-references: GB:K02212; NID:g177830; PIDN:AAB59495.1; PID:g177831
A;Experimental source: S variant allele
R;Rosenberg, S.; Barr, P.J.; Najarian, R.C.; Hallewell, R.A.
Nature 312, 77-80, 1984
A;Title: Synthesis in yeast of a functional oxidation-resistant mutant of human alpha
A;Reference number: A93352; MUID:85036645; PMID:6387509
A;Accession: A93352
A;Molecule type: mRNA
A;Residues: 1-124,'H',126-325,'I',327-418 <ROS>
A;Cross-references: EMBL:X01683; NID:g28965
R;Bollen, A.; Herzog, A.; Cravador, A.; Herion, P.; Chuchana, P.; Vander Straten, A.;
DNA 2, 255-264, 1983
A;Title: Cloning and expression in Escherichia coli of full-length complementary DNA
A;Reference number: A90944; MUID:84107980; PMID:6319097
A;Accession: A90944
A;Molecule type: mRNA
A;Residues: 1-138,'DG',141-272,'N',274-418 <BOL>
A;Cross-references: GB:K01396; NID:g28965
A;Note: this sequence has been corrected in reference A58528
R;Colau, B.; Chuchana, P.; Bollen, A.
DNA 3, 327-330, 1984
A;Title: Revised sequence of full-length complementary DNA coding for human alpha-1-a
A;Reference number: A58528; MUID:85026667; PMID:6333329
A;Contents: corrections to sequence in A90944
A;Accession: A58528
A;Molecule type: mRNA
A;Residues: 1-418 <COL>
A;Cross-references: GB:K01396; NID:g28965; PIDN:CAA25838.1; PID:g28966
R;Ciliberto, G.; Dente, L.; Cortese, R.
Cell 41, 531-540, 1985
A;Title: Cell-specific expression of a transfected human alpha-1-antitrypsin gene.
A;Reference number: A23174; MUID:85176977; PMID:2985281
A;Accession: A23174

A;Molecule type: mRNA
A;Residues: 1-11,13-173,'H',175-228,'D',230-418 <CIL>
A;Cross-references: GB:M11465; NID:g177826; PIDN:AAA51546.1; PID:g177827
A;Note: the authors state that this sequence corresponds to the M (normal) allele; 3 var
R;Carrell, R.W.; Jeppsson, J.O.; Laurell, C.B.; Brennan, S.O.; Owen, M.C.; Vaughan, L.;
Nature 298, 329-334, 1982
A;Title: Structure and variation of human alpha-1-antitrypsin.
A;Reference number: A93281; MUID:82220135; PMID:7045697
A;Accession: A93281
A;Molecule type: protein
A;Residues: 25-418 <CAR>
A;Note: peptide sequence differences with A21853 (Leu-200 and the amidation states of re
R;Zhu, X.J.; Kang, S.S.; Hargrove, K.; Shochat, D.; Jarrells, M.; Mojesky, M.; Chan, S.K
Biochem. J. 246, 25-36, 1987
A;Title: The identification of epitopic sites in human alpha-1-proteinase inhibitor.
A;Reference number: A32336; MUID:88049621; PMID:2445337
A;Accession: A32336
A;Molecule type: protein
A;Residues: 25-418 <ZHU>
A;Note: peptides were sequenced or partially sequenced and ordered by comparison with A2
R;Weiland, K.L.; Falany, C.N.; Dooley, T.P.
submitted to the EMBL Data Library, December 1989
A;Description: Identification of a cDNA encoding a variant form of the human proteolytic
A;Reference number: S14476
A;Accession: S14476
A;Molecule type: mRNA
A;Residues: 142-230,'Y',232-338 <WEI>
A;Cross-references: EMBL:X17122; NID:g28636; PIDN:CAA34982.1; PID:g28637
A;Experimental source: a variant form
R;Riley, J.H.; Bathurst, I.C.; Edbrooke, M.R.; Carrell, R.W.; Craig, R.K.
FEBS Lett. 189, 361-366, 1985
A;Title: Alpha-1-antitrypsin and serum albumin mRNA accumulation in normal, acute phase
A;Reference number: A24013; MUID:86005469; PMID:3876243
A;Accession: A24013
A;Molecule type: mRNA
A;Residues: 292-418 <RIL>
A;Cross-references: EMBL:X02920; NID:g24437; PIDN:CAA26677.1; PID:g24438
R;Schulze, A.J.; Baumann, U.; Knof, S.; Jaeger, E.; Huber, R.; Laurell, C.B.
Eur. J. Biochem. 194, 51-56, 1990
A;Title: Structural transition of alpha(1)-antitrypsin by a peptide sequentially similar
A;Reference number: S13833; MUID:91071209; PMID:2253623
A;Accession: S13833
A;Molecule type: protein
A;Residues: 25-41 <SCH>
R;Niemann, M.A.; Narkates, A.J.; Miller, E.J.
Matrix 12, 233-241, 1992
A;Title: Isolation and serine protease inhibitory activity of the 44-residue, C-terminal
A;Reference number: S23516; MUID:93024095; PMID:1406456
A;Accession: S23516
A;Molecule type: protein
A;Residues: 375-409,'L',411-413,'S' <NIE>
R;Dengler, R.; Eger, G.; Lottspeich, F.; Plewan, A.; Ogilvie, A.; Emmerich, B.
Biol. Chem. Hoppe-Seyler 373, 581-588, 1992
A;Title: Proteolytic inactivation of alpha(1)-proteinase inhibitor in vivo: detection, c
A;Reference number: S23962; MUID:92384968; PMID:1515087
A;Accession: S23962
A;Molecule type: protein
A;Residues: 44-53;384-392 <DEN>
R;Dengler, R.; Lottspeich, F.; Oberthuer, W.; Mast, A.E.; Emmerich, B.
Biol. Chem. Hoppe-Seyler 376, 165-172, 1995
A;Title: Limited proteolysis of alpha(1)-proteinase inhibitor (alpha(1)-PI) in acute leu
A;Reference number: S55249; MUID:95336645; PMID:7612193
A;Accession: S55249
A;Molecule type: protein
A;Residues: 25-28;43-47;207-208;382-389;414-418 <DE2>
R;Leicht, M.; Long, G.L.; Chandra, T.; Kurachi, K.; Kidd, V.J.; Mace, M.
Nature 297, 655-659, 1982
A;Title: Sequence homology and structural comparison between the chromosomal human alpha
A;Reference number: I39371; MUID:82220035; PMID:6979715
A;Accession: I39371
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-67 <LEI1>
A;Cross-references: GB:J00064; NID:g177817; PIDN:AAB59369.1; PID:g177822
A;Accession: I39372
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 196-225 <LEI2>
A;Cross-references: GB:J00066; NID:g177819; PIDN:AAB59370.1; PID:g177823
R;Chang, W.S.W.; Wardell, M.R.; Lomas, D.A.; Carrell, R.W.
Biochem. J. 314, 647-653, 1996
A;Title: Probing serpin reactive-loop conformations by proteolytic cleavage.
A;Reference number: S63599; MUID:96239126; PMID:8670081
A;Accession: S63599
A;Molecule type: protein
A;Residues: 371-385 <CHA>
R;Coutelle, C.; Speer, A.; Rogers, J.; Kalsheker, N.; Humphries, S.; Williamson, R.
Biomed. Biochim. Acta 44, 421-431, 1985
A;Title: Construction and partial characterization of a human liver cDNA library.
A;Reference number: I39370; MUID:85225507; PMID:3873938
A;Accession: I39370
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 387-399,'D',401-418 <COU>
A;Cross-references: GB:M26123; NID:g177815; PIDN:AAA51545.1; PID:g177816
R;Faber, J.P.; Weidinger, S.; Olek, K.
Am. J. Hum. Genet. 46, 1158-1162, 1990
A;Title: Sequence data of the rare deficient alpha-1-antitrypsin variant PI Zaugsburg
A;Reference number: A35338; MUID:90252805; PMID:2339709
A;Accession: A35338
A;Status: nucleic acid sequence not shown; not compared with conceptual translation
A;Molecule type: DNA
A;Residues: 122-124,'H',126-128;363-365,'K',367-369 <FAB>
A;Experimental source: mutant PI Zaugsberg
A;Note: this Z mutation with Lys-366 arose from the M2 variant with His-125
R;Loebermann, H.; Tokuoka, R.; Deisenhofer, J.; Huber, R.
submitted to the Brookhaven Protein Data Bank, September 1988
A;Reference number: A50775; PDB:7API
A;Contents: annotation; X-ray crystallography, 3.0 angstroms, tetragonal form 1, resi
R;Loebermann, H.; Tokuoka, R.; Deisenhofer, J.; Huber, R.
submitted to the Brookhaven Protein Data Bank, September 1988
A;Reference number: A50794; PDB:8API
A;Contents: annotation; X-ray crystallography, 3.1 angstroms, hexagonal form, residue
R;Loebermann, H.; Tokuoka, R.; Deisenhofer, J.; Huber, R.
submitted to the Brookhaven Protein Data Bank, September 1988
A;Reference number: A50810; PDB:9API
A;Contents: annotation; X-ray crystallography, 3.0 angstroms, tetragonal form 2, resi
R;Loebermann, H.; Tokuoka, R.; Deisenhofer, J.; Huber, R.
J. Mol. Biol. 177, 531-556, 1984
A;Title: Human alpha-1-proteinase inhibitor. Crystal structure analysis of two crysta
A;Reference number: A58525; MUID:84292309; PMID:6332197
A;Contents: annotation; X-ray crystallography, 3.0 angstroms
R;Carrell, R.W.; Jeppsson, J.O.; Vaughan, L.; Brennan, S.O.; Owen, M.C.; Boswell, D.R
FEBS Lett. 135, 301-303, 1981
A;Title: Human alpha-1-antitrypsin: carbohydrate attachment and sequence homology.
A;Reference number: A58526; MUID:82095611; PMID:6976274
A;Contents: annotation; carbohydrate attchment sites
C;Comment: The Z variant allele has Lys-366. Deficiency of the normal inhibitor in in
sis.
C;Genetics:
A;Gene: GDB:PI
A;Cross-references: GDB:120289; OMIM:107400
A;Map position: 14q32.1-14q32.1
A;Introns: 216/1; 306/2; 355/3
A;Note: the first intron occurs before the initiator codon
C;Function:
A;Description: inhibitor of serine proteinases, primarily leukocyte elastase and coll
A;Note: it also inhibits plasmin, thrombin, kallikrein, trypsin, and chymotrypsin
C;Superfamily: antithrombin III
C;Keywords: acute phase; emphysema; glycoprotein; plasma; polymorphism; serine protei
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-418/Product: alpha-1-antitrypsin #status experimental <MAT>
F;70,107,271/Binding site: carbohydrate (Asn) (covalent) #status experimental
F;382/Inhibitory site: Met (elastase, collagenase) #status experimental

Query Match 76.7%; Score 2052.5; DB 1; Length 418;

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  Best Local Similarity   97.8%;  Pred. No. 3.1e-127;
  Matches  399;  Conservative    2;  Mismatches    4;  Indels    3;  Gaps    1;

Qy      96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
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Db      14 GLC---CLVPVSLAEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 70

Qy     156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      71 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 130

Qy     216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     131 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 190

Qy     276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     191 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 250

Qy     336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     251 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 310

Qy     396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLTIDEKGTE 455
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     311 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLTIDEKGTE 370

Qy     456 AAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK 503
           |||||||||||||||||||||||||||||||||||||||||||||||||
Db     371 AAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK 418


RESULT 2
ITBA
alpha-1-antitrypsin precursor - baboon (fragment)
N;Alternate names: alpha-1-proteinase inhibitor
C;Species: Papio sp. (baboon)
C;Date: 02-Apr-1982 #sequence_revision 02-Apr-1982 #text_change 18-Jun-1999
C;Accession: A01248
R;Kurachi, K.; Chandra, T.; Degen, S.J.F.; White, T.T.; Marchioro, T.L.; Woo, S.L.C.; Da
Proc. Natl. Acad. Sci. U.S.A. 78, 6826-6830, 1981
A;Title: Cloning and sequence of cDNA coding for alpha-1-antitrypsin.
A;Reference number: A01248; MUID:82082539; PMID:7031661
A;Accession: A01248
A;Molecule type: mRNA
A;Residues: 1-409 <KUR>
A;Cross-references: GB:J00321; NID:g176561; PIDN:AAA35377.1; PID:g176562
C;Comment: Alpha-1-antitrypsin is an inhibitor of serine proteinases. Its primary target
psin.
C;Superfamily: antithrombin III
C;Keywords: acute phase; glycoprotein; plasma; serine proteinase inhibitor
F;1-15/Domain: signal sequence (fragment) #status predicted <SIG>
F;16-409/Product: alpha-1-antitrypsin #status predicted <MAT>
F;61,98,262/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;373/Inhibitory site: Met (elastase, collagenase) #status predicted

  Query Match             71.4%;  Score 1909.5;  DB 1;  Length 409;
  Best Local Similarity   90.2%;  Pred. No. 7.3e-118;
  Matches  368;  Conservative   21;  Mismatches   16;  Indels    3;  Gaps    1;

Qy      96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
           |:|   |: |    ||||||||||||  |||:||| |||||:||||||||||||||||||
Db       5 GLC---CLLPGSLAEDPQGDAAQKTDTPPHDQNHPTLNKITPSLAEFAFSLYRQLAHQSN 61

Qy     156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
           |||||||||||||||||||||||||| |||||||||||||||:|||||||||||||:|
Db      62 STNIFFSPVSIATAFAMLSLGTKADTHSEILEGLNFNLTEIPEAQVHEGFQELLRTLNKP 121

Qy     216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
           |||||||||||||:: ||:||||||||| |||||||:||| ||||||||||:|||||||
Db     122 DSQLQLTTGNGLFLNKSLKVVDKFLEDVKNLYHSEAFSVNFEDTEEAKKQINNYVEKGTQ 181

Qy     276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
           ||:|||||||||||||||||||||||||||||||: |||||||||| ||||||||:||||
Db     182 GKVVDLVKELDRDTVFALVNYIFFKGKWERPFEVEATEEEDFHVDQATTVKVPMMRRLGM 241

Qy     336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
           ||| ||:|||||||||||||||||||||||||||||||||||||||||||:||||:|
Db     242 FNIYHCEKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENENRRSANL 301

Qy     396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLTIDEKGTE 455
           |||||:|||||||:||| ||||||||||||||||:|||||||||||||||||||||||
Db     302 HLPKLAITGTYDLKTVLGHLGITKVFSNGADLSGVTEDAPLKLSKAVHKAVLTIDEKGTE 361

Qy     456 AAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK 503
           |||||||||||||||||||||||||||||||||||||||||:|||||||||
Db     362 AAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFIGKVVNPTQK 409


RESULT 3
ITRT
alpha-1-antitrypsin precursor - rat
N;Alternate names: alpha-1-proteinase inhibitor
C;Species: Rattus norvegicus (Norway rat)
C;Date: 31-Mar-1992 #sequence_revision 31-Dec-1993 #text_change 16-Jun-2000
C;Accession: A33892; B33892; S08016; JX0123; A38823
R;Chao, S.; Chai, K.X.; Chao, L.; Chao, J.
Biochemistry 29, 323-329, 1990
A;Title: Molecular cloning and primary structure of rat alpha-1-antitrypsin.
A;Reference number: A33892; MUID:90148955; PMID:2302382
A;Accession: A33892
A;Molecule type: mRNA
A;Residues: 4-411 <CHA>
A;Cross-references: GB:M32247; NID:g203062; PIDN:AAA40788.1; PID:g203063
A;Accession: B33892
A;Molecule type: protein
A;Residues: 25-57 <CH2>
R;Flink, I.L.; Bailey, T.; Morkin, E.
submitted to the EMBL Data Library, August 1989
A;Reference number: S08016
A;Accession: S08016
A;Molecule type: mRNA
A;Residues: 188-246,'I',248-321,'D',323-389 <FLI>
A;Cross-references: EMBL:X16273; NID:g57299; PIDN:CAA34349.1; PID:g930263
R;Misumi, Y.; Sohda, M.; Ohkubo, K.; Takami, N.; Oda, K.; Ikehara, Y.
J. Biochem. 108, 230-234, 1990
A;Title: Molecular cloning and sequencing of the cDNA of rat alpha-1-protease inhibit
A;Reference number: JX0123; MUID:91035351; PMID:2229024
A;Accession: JX0123
A;Molecule type: mRNA
A;Residues: 1-13,'G',15-83,'V',85-247,'Y',249-317,'N',319-411 <MIS>
A;Cross-references: GB:D00675; NID:g220648; PIDN:BAA00579.1; PID:g220649
A;Experimental source: serum
A;Accession: A38823
A;Molecule type: protein
A;Residues: 25-45 <MI2>
C;Comment: Alpha-1-antitrypsin is an inhibitor of serine proteinases. Its primary tar
psin.
C;Superfamily: antithrombin III
C;Keywords: acute phase; glycoprotein; plasma; serine proteinase inhibitor
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-411/Product: alpha-1-antitrypsin #status experimental <MAT>
F;64,101,265/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;376/Inhibitory site: Met (elastase, collagenase) #status predicted

  Query Match             54.9%;  Score 1467.5;  DB 1;  Length 411;
  Best Local Similarity   67.1%;  Pred. No. 7.6e-89;
  Matches  278;  Conservative   66;  Mismatches   61;  Indels    9;  Gaps    3;

Qy      89 RDLKCCMGMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYR 148
           | |     :|   |::|    ||     ||:|||| ||  ||: ||: |||:|||||||
Db       7 RGLLLLAALC---CLAPSFLAED-----AQETDTSQQDQS-PTYRKISSNLADFAFSLYR 57

Qy     149 QLAHQSNSTNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQEL 208
           :| ||||::|||||||:|| |||||||||:| ||  :||||| ||||:|||| ||: |  |
Db      58 ELVHQSNTSNIFFSPMSITTAFAMLSLGSKGDTRKQILEGLEFNLTQIPEADIHKAFHHL 117
```

```
Qy    209 LRTLNQPDSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQIND 268
          |:|||:|||:||| |||||||::: ||||:||||:|| ||||||:||| |:||||| |||
Db    118 LQTLNRPDSELQLNTGNGLFVNKNLKLVEKFLEEVKNNYHSEAFSVNFADSEEAKKVIND 177

Qy    269 YVEKGTQGKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVP 328
          |||||||||||||:|:|| |||||||||||||||||:||| : | : |||||: ||||||
Db    178 YVEKGTQGKIVDLMKQLDEDTVFALVNYIFFKGKWKRPFNPEHTRDADFHVDKSTTVKVP 237

Qy    329 MMKRLGMFNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENE 388
          || ||||:: :|  |||||||| ||||||||| |||:||:|||  || |:|::|| |
Db    238 MMNRLGMFDMHYCSTLSSWVLMMDYLGNATAIFLLPDDGKMQHLEQTLTKDLISRFLLNR 297

Qy    389 DRRSASLHLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLT 448
            ||| |: ||||||:|||:||::|  ||||:||:| |||||:||:|||||:||||||||
Db    298 QTRSAILYFPKLSISGTYNLKTLLSSLGITRVFNNDADLSGITEDAPLKLSQAVHKAVLT 357

Qy    449 IDEKGTEAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQ 502
          :|||:|||||||  :|||:|||:||:|||: ||:|:::|  |:||||:|||::||:
Db    358 LDERGTEAAGATVVEAVPMSLPPQVKFDHPFIFMIVESETQSPLFVGKVIDPTR 411
```

RESULT 4
ITSH
alpha-1-antitrypsin precursor - sheep
N;Alternate names: alpha-1-proteinase inhibitor
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 18-Jun-1999
C;Accession: S05312
R;Brown, W.M.; Dziegielewska, K.M.; Foreman, R.C.; Saunders, N.R.; Wu, Y.
Nucleic Acids Res. 17, 6398, 1989
A;Title: Nucleotide and deduced amino acid sequence of sheep alpha-1 antitrypsin.
A;Reference number: S05312; MUID:89366677; PMID:2788872
A;Accession: S05312
A;Molecule type: mRNA
A;Residues: 1-416 <BRO>
A;Cross-references: EMBL:X15555; NID:g1369; PIDN:CAA33561.1; PID:g1370
A;Note: the authors translated the codon ATC for residue 395 as Ala
C;Comment: Alpha-1-antitrypsin is an inhibitor of serine proteinases. Its primary target
psin.
C;Superfamily: antithrombin III
C;Keywords: acute phase; glycoprotein; plasma; serine proteinase inhibitor
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-416/Product: alpha-1-antitrypsin #status predicted <MAT>
F;68,105,269/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;380/Inhibitory site: Met (elastase, collagenase) #status predicted

  Query Match 54.8%; Score 1465.5; DB 1; Length 416;
  Best Local Similarity 67.6%; Pred. No. 1e-88;
  Matches 280; Conservative 62; Mismatches 67; Indels 5; Gaps 2;

```
Qy     89 RDLKCCMGMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYR 148
          | |     :|   |::|       || | |:|| : | :     :|| |||| ||||:|
Db      7 RGLLLLAALC---CLAPTSLAGVLQGHAVQETDDTAHQE--AACHKIAPNLANFAFSIYH 61

Qy    149 QLAHQSNSTNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQEL 208
          :||||||::|||||||||:|||||||| | :|| |||||| ||||: ||:|:|:||| |
Db     62 KLAHQSNTSNIFFSPVSIASAFAMLSLGAKGNTHTEILEGLGFNLTELAEAEIHKGFQHL 121

Qy    209 LRTLNQPDSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQIND 268
          | ||||||: |||||||||||::|  |||| |||||| |:||:||::|| | |||||:|||
Db    122 LHTLNQPNHQLQLTTGNGLFINESAKLVDTFLEDVKNLHHSKAFSINFRDAEEAKKKIND 181

Qy    269 YVEKGTQGKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVP 328
          ||||||: |||||||:||:|||||||||| |||||||:|||: | | ||||:: ||||||
Db    182 YVEKGSHGKIVDLVKDLDQDTVFALVNYISFKGKWEKPFEVEHTTERDFHVNEQTTVKVP 241

Qy    329 MMKRLGMFNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENE 388
          || |||||:: :| ||:|||||: |:|| || | ||| |||| ||::| :::: |||| :
Db    242 MMNRLGMFDLHYCDKLASWVLLLDYVGNVTACFILPDLGKLQQLEDKLNNELLAKFLEKK 301

Qy    389 DRRSASLHLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLT 448
            ||:|||||||: |||||:|||:||| :||||||||||:||| || :|||:||| ||
```

```
Db    302 YASSANLHLPKLSISETYDLKTVLGELGINRVFSNGADLSGITEEQPLMVSKALHKAALT 361

Qy    449 IDEKGTEAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQ 502
          |||||||||| |||||||:||:|:||:||: :: ::|||||||:||||||||
Db    362 IDEKGTEAAGATFLEAIPMSLPPDVEFNRPFLCILYDRNTKSPLFVGKVVNPTQ 415
```

RESULT 5
S60036
alpha-1-antitrypsin precursor - golden hamster
N;Alternate names: alpha-1-antiproteinase
C;Species: Mesocricetus auratus (golden hamster)
C;Date: 24-Aug-1996 #sequence_revision 13-Mar-1997 #text_change 20-Jun-2000
C;Accession: S60036
R;Nakatani, T.; Suzuki, Y.; Yoshida, K.; Sinohara, H.
Biochim. Biophys. Acta 1263, 245-248, 1995
A;Title: Molecular cloning and sequence analysis of cDNA encoding plasma alpha-1-anti
A;Reference number: S60036; MUID:96004896; PMID:7548212
A;Accession: S60036
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-413 <NAK>
A;Cross-references: EMBL:D49709; NID:g1088432; PIDN:BAA08557.1; PID:g1794155
A;Note: the source is designated as Syrian hamster
C;Superfamily: antithrombin III
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-413/Product: alpha-1-antitrypsin #status predicted <MAT>

  Query Match 54.5%; Score 1458.5; DB 2; Length 413;
  Best Local Similarity 68.6%; Pred. No. 3e-88;
  Matches 280; Conservative 56; Mismatches 63; Indels 9; Gaps 3;

```
Qy     96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
          |:|   |: |    ||     ||:|| |  ||:|    || ||||:|:|:|||:| ||||
Db     14 GLC---CLVPSFLAED-----AQETDASKQDQEHQACCKIAPNLADFSFNLYRELVHQSN 65

Qy    156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
          :|||||||||||||||||||||  || :||||| |||||| ||::|:|| ||:| |:|
Db     66 TTNIFFSPVSIATAFAMLSLGTKGVTHTQILEGLGFNLTEIAEAEVHKGFHNLLQTFNRP 125

Qy    216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
          |::|||||||||:   |||||||||:||  |||||:||| |:||||| || :||||||
Db    126 DNELQLTTGNGLFIHNNLKLVDKFLEEVKNDYHSEAFSVNFTDSEEAKKVINGFVEKGTQ 185

Qy    276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
          |||||||||:||:||| ||||||||||||::||:  :||| |||||: |||||||| ||||
Db    186 GKIVDLVKDLDKDTVLALVNYIFFKGKWKKPFDADNTEEADFHVDKTTTVKVPMMSRLGM 245

Qy    336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
          |:: :   |||||||| |||||||| |||:||:|||| |  :|| |||::   |||::
Db    246 FDVHYVSTLSSWVLLMDYLGNATAIFILPDDGKMQHLEQTLNKEIIGKFLKDRHTRSANV 305

Qy    396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLTIDEKGTE 455
          | |||||:|||:||: |  ||||:|||||||||:||: |||| ||||||||||||:|||
Db    306 HFPKLSISGTYNLKTALDPLGITQVFSNGADLSGITEDVPLKLGKAVHKAVLTIDERGTE 365

Qy    456 AAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNT-KSPLFMGKVVNPTQ 502
          |||| |:| ||||:|||| || ||: :: :: | |||||:||||:||:
Db    366 AAGATFMEIIPMSVPPEVNFNSPFIAIIYDRQTAKSPLFVGKVVDPTR 413
```

RESULT 6
S21097
alpha-1-antitrypsin precursor - bovine
N;Alternate names: alpha-1-proteinase inhibitor; proteinase inhibitor Inh3
C;Species: Bos primigenius taurus (cattle)
C;Date: 07-Apr-1994 #sequence_revision 19-May-1994 #text_change 16-Jul-1999
C;Accession: S21097; PC2040; S18920
R;Sinha, D.; Bakhshi, M.R.; Kirby, E.P.
Biochim. Biophys. Acta 1130, 209-212, 1992
A;Title: Complete cDNA sequence of bovine alpha1-antitrypsin.
A;Reference number: S21097; MUID:92223096; PMID:1562597
A;Accession: S21097

A;Molecule type: mRNA
A;Residues: 1-416 <SIN>
A;Cross-references: EMBL:X63129; NID:g41; PIDN:CAA44840.1; PID:g42
A;Note: the sequence from Fig. 2 is inconsistent with that from Fig. 1 in having 209-Thr
R;Sinha, D.; Yang, X.; Emig, F.; Kirby, E.P.
J. Biochem. 115, 387-391, 1994
A;Title: Isolation and characterization of two protease inhibitors from bovine plasma.
A;Reference number: PX0072; MUID:94334275; PMID:8056747
A;Accession: PC2040
A;Molecule type: protein
A;Residues: 25-44 <SI2>
C;Superfamily: antithrombin III
C;Keywords: acute phase; glycoprotein; plasma; serine proteinase inhibitor
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-416/Product: alpha-1-antitrypsin #status predicted <MAT>
F;68,105,143,269/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 54.1%; Score 1447.5; DB 2; Length 416;
Best Local Similarity 66.9%; Pred. No. 1.6e-87;
Matches 277; Conservative 62; Mismatches 70; Indels 5; Gaps 2;

```
Qy      89 RDLKCCMGMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYR 148
           | |     :|   |::|:      || | |:|| : | :     :|| |||| ||||:|
Db       7 RGLLLLAALC---CLAPISLAGVLQGHAVQETDDTSHQE--AACHKIAPNLANFAFSIYH 61

Qy     149 QLAHQSNSTNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQEL 208
           ||||||::||||||||||:|||||||| | :|| |||:|| ||||| ||::||:||| |
Db      62 HLAHQSNTSNIFFSPVSIASAFAMLSLGAKGNTHTEILKGLGFNLTELAEAEIHKGFQHL 121

Qy     209 LRTLNQPDSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQIND 268
           | |||||: |||||||||||::|  |||| |||||| |||||||::|| | |||||:|||
Db     122 LHTLNQPNHQLQLTTGNGLFINESAKLVDTFLEDVKNLYHSEAFSINFRDAEEAKKKIND 181

Qy     269 YVEKGTQGKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVP 328
           |||||: ||||:||| || :|||||||| |||||:|||:| | | |||||: ||||||
Db     182 YVEKGSHGKIVELVKVLDPNTVFALVNYISFKGKWEKPFEMKHTTERDFHVDEQTTVKVP 241

Qy     329 MMKRLGMFNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENE 388
           || |||||:: :| ||:|||||: |:|| || | ||| |||| ||::| :::: |||| :
Db     242 MMNRLGMFDLHYCDKLASWVLLLDYVGNVTACFILPDLGKLQQLEDKLNNELLAKFLEKK 301

Qy     389 DRRSASLHLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLT 448
           ||:|||||||: |||||||| :||||:||| |||||:|:| |||:|||:||| ||
Db     302 YASSANLHLPKLSISETYDLKSVLGDVGITEVFSDRADLSGITKEQPLKVSKALHKAALT 361

Qy     449 IDEKGTEAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQ 502
           |||||||| |: |||||||:||:|:||:||: :: ::|||||||:||||||||
Db     362 IDEKGTEAVGSTFLEAIPMSLPPDVEFNRPFLCILYDRNTKSPLFVGKVVNPTQ 415
```

RESULT 7
JX0346
alpha-1-antiproteinase precursor - Mongolian jird
C;Species: Meriones unguiculatus (Mongolian jird)
C;Date: 22-Apr-1995 #sequence_revision 26-May-1995 #text_change 28-May-1999
C;Accession: JX0346; PC2357
R;Goto, K.; Suzuki, Y.; Yoshida, K.; Yamamoto, K.; Sinohara, H.
J. Biochem. 116, 582-588, 1994
A;Title: Plasma alpha-1-antiproteinase from the Mongolian gerbil, Meriones unguiculatus:
A;Reference number: JX0346; MUID:95155268; PMID:7852275
A;Accession: JX0346
A;Molecule type: mRNA
A;Residues: 1-406 <GOT>
A;Cross-references: GB:S77822; NID:g998663; PIDN:AAB33367.1; PID:g998664
A;Accession: PC2357
A;Molecule type: protein
A;Residues: 25-44;77-96 <GO2>
A;Experimental source: plasma
C;Superfamily: antithrombin III
C;Keywords: glycoprotein
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-406/Product: alpha-1-antiproteinase #status predicted <MAT>
F;383-387/Region: serpin binding #status predicted
F;59,96,134,260,403/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;371/Inhibitory site: Met (trypsin, chymotrypsin, elastase) #status predicted

Query Match 51.8%; Score 1386; DB 2; Length 406;
Best Local Similarity 66.6%; Pred. No. 1.7e-83;
Matches 271; Conservative 58; Mismatches 64; Indels 14; Gaps 4;

```
Qy      96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
           |:|   |: |    ||     |:|||:|| |||     :  |||:||| ||| |:||||
Db      14 GLC---CLVPSFLAED-----AEKTDSSH--QDH----IMASNLADFAFGLYRVLSHQSN 59

Qy     156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
           :|||| ||:||||| ||||||:| ||  ::|:||:|||||  || ||:||| ||:|||:|
Db      60 TTNIFLSPLSIATALAMLSLGSKDDTKAQLLQGLHFNLTETSEADIHKGFQHLLKTLNRP 119

Qy     216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
           |::|||||: ||::  | ||:||||:||  |||||| ||| |:||||| || :||| |
Db     120 DNELQLTTGSSLFVNNSLNLVEKFLEEVKNHYHSEAFFVNFADSEEAKKTINSFVEKATH 179

Qy     276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
           ||||||||:|: ||| ||||||||:||||:||: : ||| ||||: |||||||| |:||
Db     180 GKIVDLVKDLEIDTVLALVNYIFFRGKWEKPFDPELTEEADFHVDKSTTVKVPMMNRMGM 239

Qy     336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
           |:: :|  |||||||| |||||||| ||||||:|||  || : | |||:|   |||::
Db     240 FDVHYCDTLSSWVLLMDYLGNATAIFILPDEGKMQHLEQTLTKEHIYKFLQNRHTRSANV 299

Qy     396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLTIDEKGTE 455
           |||||||:|||:|| ||  ||||:|||||||||:| : |||||||||||||:||:|||
Db     300 HLPKLSISGTYNLKKVLSPLGITQVFSNGADLSGITTDVPLKLSKAVHKAVLTLDERGTE 359

Qy     456 AAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQ 502
           |||   |||:|||||:| |  ||| :: :::|:||||:||||||||
Db     360 AAGTTVLEAVPMSIPPDVCFKNPFVVIICDKHTQSPLFVGKVVNPTQ 406
```

RESULT 8
I49470
alpha-1 proteinase inhibitor 1 - mouse
N;Alternate names: alpha-1-antitrypsin
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 16-Jul-1999
C;Accession: I49470; A25495
R;Borriello, F.; Krauter, K.S.
Proc. Natl. Acad. Sci. U.S.A. 88, 9417-9421, 1991
A;Title: Multiple murine alpha 1-protease inhibitor genes show unusual evolutionary d
A;Reference number: I49470; MUID:92052104; PMID:1946354
A;Accession: I49470
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-413 <RES>
A;Cross-references: GB:M75721; NID:g191841; PIDN:AAC28869.1; PID:g191842
R;Krauter, K.S.; Citron, B.A.; Hsu, M.T.; Powell, D.; Darnell Jr., J.E.
DNA 5, 29-36, 1986
A;Title: Isolation and characterization of the alpha-1-antitrypsin gene of mice.
A;Reference number: A25495; MUID:86163765; PMID:3007061
A;Accession: A25495
A;Molecule type: mRNA
A;Residues: 211-245,'D',247-322,'L',324-403,'V',405-413 <KRA>
A;Cross-references: GB:M12586; NID:g192092; PIDN:AAA51624.1; PID:g192094
C;Genetics:
A;Gene: alpha-1 PI-1
C;Superfamily: antithrombin III

Query Match 50.4%; Score 1347; DB 2; Length 413;
Best Local Similarity 62.3%; Pred. No. 6.2e-81;
Matches 255; Conservative 72; Mismatches 72; Indels 10; Gaps 4;

```
Qy      96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
           |:|   |: |    ||       |:|||| ||  |  ::|  || :|| ||||:| ||||
Db      14 GLC---CLVPSFLAED-----VQETDTSQKDQS-PASHEIATNLGDFAISLYRELVHQSN 64

Qy     156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
```

```
          ::|||||||||||||||||||:| ||| :|||||  ||||:  || ||: || ||:|||:|
Db      65 TSNIFFSPVSIATAFAMLSLGSKGDTHTQILEGLQFNLTQTSEADIHKSFQHLLQTLNRP 124

Qy     216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
           ||:|||:||||||::  ||||:||||: |  | :| |:||| ::|||||  |||:||||||
Db     125 DSELQLSTGNGLFVNNDLKLVEKFLEEAKNHYQAEVFSVNFAESEEAKKVINDFVEKGTQ 184

Qy     276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
           ||| : ||:||:|||||| ||| |||||::||: ::||| :||||: ||||||||   ||
Db     185 GKIAEAVKKLDQDTVFALANYILFKGKWKKPFDPENTEEAEFHVDESTTVKVPMMTLSGM 244

Qy     336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
           :: ||  |||||||| | |||||:| |||:||:||||  |: ::|:||| |  || | :
Db     245 LHVHHCSTLSSWVLLMDYAGNATAVFLLPDDGKMQHLEQTLSKELISKFLLNRRRRLAQI 304

Qy     396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEE-APLKLSKAVHKAVLTIDEKGT 454
           | |:|||:| |:||::::  ||||::|:||||||:||| |||||:||||||||||| ||
Db     305 HFPRLSISGEYNLKTLMSPLGITRIFNNGADLSGITEENAPLKLSQAVHKAVLTIDETGT 364

Qy     455 EAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK 503
           |||    |: :|||:|| ::|: ||:|:: |::|:||:|:||||:|| |
Db     365 EAAAVTVLQMVPMSMPPILRFDHPFLFIIFEEHTQSPIFLGKVVDPTHK 413


RESULT 9
I49471
alpha-1 proteinase inhibitor 2 - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 16-Jul-1999
C;Accession: I49471
R;Borriello, F.; Krauter, K.S.
Proc. Natl. Acad. Sci. U.S.A. 88, 9417-9421, 1991
A;Title: Multiple murine alpha 1-protease inhibitor genes show unusual evolutionary dive
A;Reference number: I49470; MUID:92052104; PMID:1946354
A;Accession: I49471
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-402 <RES>
A;Cross-references: GB:M75716; NID:g191843; PIDN:AAC28865.1; PID:g191844
C;Genetics:
A;Gene: alpha-1 PI-2
C;Superfamily: antithrombin III

  Query Match             50.3%;  Score 1346;  DB 2;  Length 402;
  Best Local Similarity   62.6%;  Pred. No. 7e-81;
  Matches  256;  Conservative   71;  Mismatches   72;  Indels   10;  Gaps    4;

Qy      96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
           |:|   |: |    ||       |:|||| ||  |  ::|  || :|| ||||:| ||||
Db       3 GLC---CMVPSFLAED-----VQETDTSQKDQS-PASHEIATNLGDFAISLYRELVHQSN 53

Qy     156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
           ::|||||||||||||||||:| ||| :||||| ||||:  || ||: || ||:|||:|
Db      54 TSNIFFSPVSIATAFAMLSLGSKGDTHTQILEGLQFNLTQTSEADIHKSFQHLLQTLNRP 113

Qy     216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
           ||:|||:||||||::  ||||:||||: |  | :| |:||| ::|||||  |||:||||||
Db     114 DSELQLSTGNGLFVNNDLKLVEKFLEEAKNHYQAEVFSVNFAESEEAKKVINDFVEKGTQ 173

Qy     276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
           ||||: |||||:|||||| ||| |||||::||: ::||| :||||: ||||||||   ||
Db     174 GKIVEAVKELDQDTVFALANYILFKGKWKKPFDPENTEEAEFHVDKSTTVKVPMMMLSGM 233

Qy     336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
           :: ||  |||||||| | |||:|:| ||::||:|||  |  ::|:| | |  ||   :
Db     234 LDVHHCSILSSWVLLMDYAGNASAVFLLPEDGKMQHLEQTLNKELISKILLNRRRRLVQI 293

Qy     396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEE-APLKLSKAVHKAVLTIDEKGT 454
           |:|:|||:| |:||::  ||||::|:||||||:||| ||||||||||||||||| ||
Db     294 HIPRLSISGDYNLKTLMSPLGITRIFNNGADLSGITEENAPLKLSKAVHKAVLTIDETGT 353

Qy     455 EAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK 503
           ||| |   ||:|||:|| ::|: ||:|:: |::|:||:|:|||||:|| |
Db     354 EAAAATVFEAVPMSMPPILRFDHPFLFIIFEEHTQSPIFVGKVVDPTHK 402


RESULT 10
I49452
alpha-1-antitrypsin precursor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 16-Jul-1999
C;Accession: I49452
R;Sifers, R.N.; Ledley, F.D.; Reed-Fourquet, L.; Ledbetter, D.H.; Ledbetter, S.A.; Wo
Genomics 6, 100-104, 1990
A;Title: Complete cDNA sequence and chromosomal localization of mouse alpha-1-antitry
A;Reference number: I49452; MUID:90152670; PMID:2303252
A;Accession: I49452
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-413 <RES>
A;Cross-references: GB:M25529; NID:g191549; PIDN:AAA37132.1; PID:g309079
C;Superfamily: antithrombin III

  Query Match             50.3%;  Score 1345;  DB 2;  Length 413;
  Best Local Similarity   62.6%;  Pred. No. 8.4e-81;
  Matches  256;  Conservative   71;  Mismatches   72;  Indels   10;  Gaps    4;

Qy      96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
           |:|   |: |    ||       |:|||| ||  |  ::|  || :|| ||||:| ||||
Db      14 GLC---CLVPSFLAED-----VQETDTSQKDQS-PASHEIATNLGDFAISLYRELVHQSN 64

Qy     156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
           ::|||||||||||||||||:| ||| :||||| ||||:  || ||: || ||:|||:|
Db      65 TSNIFFSPVSIATAFAMLSLGSKGDTHTQILEGLQFNLTQTSEADIHKSFQHLLQTLNRP 124

Qy     216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
           ||:|||:||||||::  ||||:||||: |  | :| |:||| ::|||||  |||:||||||
Db     125 DSELQLSTGNGLFVNNDLKLVEKFLEEAKNHYQAEVFSVNFAESEEAKKVINDFVEKGTQ 184

Qy     276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
           ||||: |||||:|||||| ||| |||||::||: ::||| :||||: ||||||||   ||
Db     185 GKIVEAVKELDQDTVFALGNYILFKGKWKKPFDPENTEEAEFHVDKSTTVKVPMMTLSGM 244

Qy     336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
           :: ||  |||||||| | |||:|:| ||::||:|||  |  ::|:| | |  ||   :
Db     245 LDVHHCSTLSSWVLLMDYAGNASAVFLLPEDGKMQHLEQTLNKELISKILLNRRRRLVQI 304

Qy     396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEE-APLKLSKAVHKAVLTIDEKGT 454
           |:|:|||:| |:||::  ||||::|:||||||:||| ||||||||||||||||| ||
Db     305 HIPRLSISGEYNLKTLMSPLGITRIFNNGADLSGITEENAPLKLSKAVHKAVLTIDETGT 364

Qy     455 EAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK 503
           ||| |   ||:|||:|| ::|: ||:|:: |::|:||:|:|||||:|| |
Db     365 EAAAATVFEAVPMSMPPILRFDHPFLFIIFEEHTQSPIFVGKVVDPTHK 413


RESULT 11
S54981
alpha-1-antiproteinase isoform E precursor - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 28-Oct-1996 #sequence_revision 07-Feb-1997 #text_change 20-Jun-2000
C;Accession: S54981; S72199
R;Saito, A.; Sinohara, H.
Biochem. J. 307, 369-375, 1995
A;Title: Rabbit alpha-1-antiproteinase E: a novel recombinant serpin which does not i
A;Reference number: S54981; MUID:95251597; PMID:7733871
A;Accession: S54981
A;Molecule type: mRNA
A;Residues: 1-413 <SAI1>
A;Cross-references: EMBL:D17725; NID:g1008927; PIDN:BAA04579.1; PID:g1008928
A;Accession: S72199
A;Molecule type: protein
A;Residues: 25-33;374-387 <SAI2>
C;Superfamily: antithrombin III
C;Keywords: acute phase; emphysema; glycoprotein; plasma; serine proteinase inhibitor
F;1-24/Domain: signal sequence #status predicted <SIG>
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F;25-413/Product: alpha-1-antiproteinase E #status experimental <MAT>

Query Match 50.2%; Score 1343.5; DB 2; Length 413;
Best Local Similarity 63.3%; Pred. No. 1.1e-80;
Matches 257; Conservative 61; Mismatches 83; Indels 5; Gaps 1;

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Qy      97 MCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSNS 156
           : |  |: |          | ||:|  | |:||||  ::| |:||||| ||||::||:||:
Db      12 LAGLGCLLP-----GFLADEAQETAVSSHEQDHPACHRIAPSLAEFALSLYREVAHESNT 66

Qy     157 TNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQPD 216
           |||||||||||| |||||||| | ||| ::|||| |||||  |||||:||: || |:|:||
Db      67 TNIFFSPVSIALAFAMLSLGAKGDTHTQVLEGLKFNLTETAEAQIHDGFRHLLHTVNRPD 126

Qy     217 SQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQG 276
           |:|||  || | : | |||  ||||| | || |||| |:| | |:|| :|| :|||||:|
Db     127 SELQLAAGNALVVHENLKLQHKFLEDAKNLYQSEAFLVDFRDPEQAKTKINSHVEKGTRG 186

Qy     277 KIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGMF 336
           ||||||:|||  |: |||||:|||||||:||| ::|:|||||||  |||:|||| ||||:
Db     187 KIVDLVQELDARTLLALVNYVFFKGKWEKPFEPENTKEEDFHVDATTTVRVPMMSRLGMY 246

Qy     337 NIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASLH 396
           : ||  |:| || | | |||||:| |||||||||||: || ::| |||     || ::
Db     247 VMFHCSTLASTVLRMDYKGNATALFLLPDEGKLQHLEDTLTTELIAKFLAKSSLRSVTVR 306

Qy     397 LPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLTIDEKGTEA 456
           |||||:|||||| :||:||||:|||| |||||:||: |||:|:|:|||||||||:|||| 
Db     307 FPKLSISGTYDLKPLLGKLGITQVFSNNADLSGITEQEPLKVSQALHKAVLTIDERGTEA 366

Qy     457 AGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQ 502
           ||| |:| || |:|  :  ::||:|::     |||||:||||:|||
Db     367 AGASFVELIPESVPDSITLDRPFLFVIYSHEIKSPLFVGKVVDPTQ 412
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RESULT 12
I49472
alpha-1 proteinase inhibitor 3 - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 16-Jul-1999
C;Accession: I49472
R;Borriello, F.; Krauter, K.S.
Proc. Natl. Acad. Sci. U.S.A. 88, 9417-9421, 1991
A;Title: Multiple murine alpha 1-protease inhibitor genes show unusual evolutionary dive
A;Reference number: I49470; MUID:92052104; PMID:1946354
A;Accession: I49472
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-413 <RES>
A;Cross-references: GB:M75720; NID:g191845; PIDN:AAC28868.1; PID:g191846
C;Genetics:
A;Gene: alpha-1 PI-3
C;Superfamily: antithrombin III

Query Match 50.1%; Score 1341; DB 2; Length 413;
Best Local Similarity 62.6%; Pred. No. 1.5e-80;
Matches 256; Conservative 70; Mismatches 73; Indels 10; Gaps 4;

```
Qy      96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
           |:|  |: |   ||      |:|||| ||  |  ::|  || :|| ||||:| ||||
Db      14 GLC---CLVPSFLAED-----VQETDTSQKDQS-PASHEIATNLGDFAISLYRELVHQSN 64

Qy     156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
           ::|||||||||||||||||:| ||| :||||| ||||:  || ||: || ||:|||:|
Db      65 TSNIFFSPVSIATAFAMLSLGSKGDTHTQILEGLQFNLTQTSEADIHKSFQHLLQTLNRP 124

Qy     216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
           ||:|||:||||||::  ||||:||||: |  | :| |:||| ::||||| |||:||||||
Db     125 DSELQLSTGNGLFVNNDLKLVEKFLEEAKNHYQAEVFSVNFAESEEAKKVINDFVEKGTQ 184

Qy     276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
           ||| : ||:||:|||||| ||| |||||::||: ::||| :||||: ||||||||   ||
Db     185 GKIAEAVKKLDQDTVFALANYILFKGKWKKPFDPENTEEAEFHVDESTTVKVPMMTLSGM 244

Qy     336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
           :: ||  |||||||| | ||||||:| |||:||:|||| |: ::|:|||    || | :
Db     245 LDVHHCSTLSSWVLLMDYAGNATAVFLLPDDGKMQHLEQTLSKELISKFLLKRPRRLAQI 304

Qy     396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEE-APLKLSKAVHKAVLTIDEKGT 454
           | |:|||:| |:||:::  ||||::|:|||||||:||| ||||||:|||||||:|| ||
Db     305 HFPRLSISGEYNLKTLMSPLGITRIFNNGADLSGITEENAPLKLSQAVHKAVLTMDETGT 364

Qy     455 EAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK 503
           ||| |  | |:| |:|| |:|: ||:|:: |::|:||||:||||:|| |
Db     365 EAAAATVLLAVPYSMPPIVRFDHPFLFIIFEEHTQSPLFVGKVVDPTHK 413
```

RESULT 13
JX0154
alpha-1-antiproteinase F - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 04-Sep-1998 #sequence_revision 04-Sep-1998 #text_change 21-Jul-2000
C;Accession: JX0154
R;Saito, A.; Sinohara, H.
J. Biochem. 109, 158-162, 1991
A;Title: Cloning and sequencing of cDNA coding for rabbit alpha-1-antiproteinase F: a
A;Reference number: JX0154; MUID:91201273; PMID:2016265
A;Accession: JX0154
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-413 <SAI>
A;Cross-references: GB:X57710; NID:g1455; PIDN:CAA40881.1; PID:g1456
C;Superfamily: antithrombin III

Query Match 50.1%; Score 1339.5; DB 2; Length 413;
Best Local Similarity 62.8%; Pred. No. 1.9e-80;
Matches 255; Conservative 64; Mismatches 82; Indels 5; Gaps 1;

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Qy      97 MCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSNS 156
           : |  |: |          | ||:|  | |:||||  ::| |:||||| ||||::||:||:
Db      12 LAGLGCLLP-----GFLADEAQETAVSSHEQDHPACHRIAPSLAEFALSLYREVAHESNT 66

Qy     157 TNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQPD 216
           |||||||||||| |||||||| | ||| ::|||| |||||  |||||:||: || |:|:||
Db      67 TNIFFSPVSIALAFAMLSLGAKGDTHTQVLEGLKFNLTETAEAQIHDGFRHLLHTVNRPD 126

Qy     217 SQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQG 276
           |:|||   | | : | |||  ||||| | || |||| |:| | |:|| :|| :|||||:|
Db     127 SELQLAARNALVVHENLKLQHKFLEDAKNLYQSEAFLVDFRDPEQAKTKINSHVEKGTRG 186

Qy     277 KIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGMF 336
           ||||||:|||  |: |||||:|||||||:||| ::|:||||||:  |||:|||| ||| :
Db     187 KIVDLVQELDARTLLALVNYVFFKGKWEKPFEPENTKEEDFHVNATTTVRVPMMSRLGRY 246

Qy     337 NIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASLH 396
           :: ||  |:| || | | |||||:| |||||||||||: || ::|||||     || ::|
Db     247 DLFHCSTLASTVLRMDYKGNATALFLLPDEGKLQHLEDTLTTELITKFLAKSSLRSVTVH 306

Qy     397 LPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLTIDEKGTEA 456
           |||||:|||||| :||:||||:|||: |||||:||: ||| |:|:|||||||||:|||| 
Db     307 FPKLSISGTYDLKPLLGKLGITQVFSDNADLSGITEQEPLKASQALHKAVLTIDERGTEA 366

Qy     457 AGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQ 502
           ||| ::| ||||:|  :  ::||:|::     |||||:||||:|||
Db     367 AGATYMEIIPMSLPDSITLDRPFLFVIYSHEIKSPLFVGKVVDPTQ 412
```

RESULT 14
I49473
alpha-1 proteinase inhibitor 4 - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 16-Jul-1999
C;Accession: I49473
R;Borriello, F.; Krauter, K.S.
Proc. Natl. Acad. Sci. U.S.A. 88, 9417-9421, 1991
A;Title: Multiple murine alpha 1-protease inhibitor genes show unusual evolutionary d

```
A;Reference number: I49470; MUID:92052104; PMID:1946354
A;Accession: I49473
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-413 <RES>
A;Cross-references: GB:M75718; NID:g191847; PIDN:AAC28867.1; PID:g191848
C;Genetics:
A;Gene: alpha-1 PI-4
C;Superfamily: antithrombin III

  Query Match             49.6%;  Score 1328;  DB 2;  Length 413;
  Best Local Similarity   61.9%;  Pred. No. 1.1e-79;
  Matches  253;  Conservative   70;  Mismatches   76;  Indels   10;  Gaps    4;

Qy      96 GMCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSN 155
           |:|   |: |    ||       |:||||  ||  |  ::|  || :||  |||:| ||||
Db      14 GLC---CLVPSFLAED-----VQETDTSQKDQS-PASHEIATNLGDFALRLYRELVHQSN 64

Qy     156 STNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQP 215
           ::|||||||||||||||||:| ||| :||||| ||||:  || ||: || ||:|||:|
Db      65 TSNIFFSPVSIATAFAMLSLGSKGDTHTQILEGLQFNLTQTSEADIHKSFQHLLQTLNRP 124

Qy     216 DSQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQ 275
           ||:|||:||||||::  ||||:||||: |  | :| |:||| ::||||| |||:||||||
Db     125 DSELQLSTGNGLFVNNDLKLVEKFLEEAKNHYQAEVFSVNFAESEEAKKVINDFVEKGTQ 184

Qy     276 GKIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGM 335
           ||||: ||:||:|||||| ||| |||||::||: ::||| :||||: |||||||   ||
Db     185 GKIVEAVKKLDQDTVFALANYILFKGKWKQPFDPENTEEAEFHVDESTTVKVPMMTLSGM 244

Qy     336 FNIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASL 395
           :: ||  |||||||| | || ||:| |||:||:|||  |  ::|::|| |  |  | :
Db     245 LDVHHCSMLSSWVLLMDYAGNTTAVFLLPDDGKMQHLEQTLNKELISQFLLNRRRSDAQI 304

Qy     396 HLPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEE-APLKLSKAVHKAVLTIDEKGT 454
           |:|:|||:| |:||:::  ||||::|:||||||:||| ||||||||||||||||| ||
Db     305 HIPRLSISGNYNLKTLMSPLGITRIFNNGADLSGITEENAPLKLSKAVHKAVLTIDETGT 364

Qy     455 EAAGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQK 503
           ||| |  |:    |:|| |:|: ||:|:: |::|:||:|:||||:|| |
Db     365 EAAAATVLQVATYSMPPIVRFDHPFLFIIFEEHTQSPIFVGKVVDPTHK 413


RESULT 15
JX0267
alpha-1-antiproteinase S-1 precursor - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 20-Jun-2000
C;Accession: JX0267
R;Saito, A.; Sinohara, H.
J. Biochem. 113, 456-461, 1993
A;Title: Rabbit plasma alpha-1-antiproteinase s-1: cloning, sequencing, expression, and
A;Reference number: JX0267; MUID:93293795; PMID:8514734
A;Accession: JX0267
A;Molecule type: mRNA
A;Residues: 1-413 <SAI>
A;Cross-references: GB:D16104; NID:g286191; PIDN:BAA03678.1; PID:g303762
A;Experimental source: liver
A;Note: part of this sequence, including the amino end of the mature protein, was confir
C;Superfamily: antithrombin III
C;Keywords: glycoprotein
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-413/Product: alpha-1-antiproteinase S-1 #status experimental <MAT>
F;65,102,266/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             49.6%;  Score 1326.5;  DB 2;  Length 413;
  Best Local Similarity   63.1%;  Pred. No. 1.4e-79;
  Matches  256;  Conservative   60;  Mismatches   85;  Indels    5;  Gaps    1;

Qy      97 MCGKSCVSPVKAMEDPQGDAAQKTDTSHHDQDHPTFNKITPNLAEFAFSLYRQLAHQSNS 156
           : |  |: |         | ||:|  | |:|||  ::| |:|||| ||||::||:||:
Db      12 LAGLGCLLP-----GFLADEAQETAVSSHEQDHPACHRIAPSLAEFALSLYREVAHESNT 66

Qy     157 TNIFFSPVSIATAFAMLSLGTKADTHDEILEGLNFNLTEIPEAQIHEGFQELLRTLNQPD 216
           |||||||||| |||||||| | ||| ::|||| |||||  |||||:||: || |:|:||
Db      67 TNIFFSPVSIALAFAMLSLGAKGDTHTQVLEGLKFNLTETAEAQIHDGFRHLLHTVNRPD 126

Qy     217 SQLQLTTGNGLFLSEGLKLVDKFLEDVKKLYHSEAFTVNFGDTEEAKKQINDYVEKGTQG 276
           |:|||  || | : | |||  ||||| | || |||| |:| | |:|| :|| :||||||:|
Db     127 SELQLAAGNALVVHENLKLQHKFLEDAKNLYQSEAFLVDFRDPEQAKTKINSHVEKGTRG 186

Qy     277 KIVDLVKELDRDTVFALVNYIFFKGKWERPFEVKDTEEEDFHVDQVTTVKVPMMKRLGMF 336
           ||||||:|||  |: |||||:|||||||:||| ::|:|||||||  |||:|||| ||||:
Db     187 KIVDLVQELDARTLLALVNYVFFKGKWEKPFEPENTKEEDFHVDATTTVRVPMMSRLGMY 246

Qy     337 NIQHCKKLSSWVLLMKYLGNATAIFFLPDEGKLQHLENELTHDIITKFLENEDRRSASLH 396
             ||  |:| || | | |||||:| |||||||||||: || ::| |||      ||  :
Db     247 VKFHCSTLASTVLRMDYKGNATALFLLPDEGKLQHLEDTLTTELIAKFLAKSSFRSVRVR 306

Qy     397 LPKLSITGTYDLKSVLGQLGITKVFSNGADLSGVTEEAPLKLSKAVHKAVLTIDEKGTEA 456
           |||||:|||||| :||:||||:|||: |||||:||: |||:|:|:|||||||||:||||
Db     307 FPKLSISGTYDLKPLLGKLGITQVFSDNADLSGITEQEPLKVSQALHKAVLTIDERGTEA 366

Qy     457 AGAMFLEAIPMSIPPEVKFNKPFVFLMIEQNTKSPLFMGKVVNPTQ 502
           ||| |:  :| |:|  | |::||:|::     |||||:||||:|||
Db     367 AGATFVGIMPSSLPESVIFDRPFLFVIYSHELKSPLFVGKVVDPTQ 412


Search completed: November 30, 2002, 12:37:28
Job time : 13.5 secs
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